

CONTENT STANDARD 11: Engineering Design

Students will be able to supply the engineering design process to achieve desired outcomes across all technological content areas.

K-1	2-3	4-5	6	7	8
11.K-1.1 Design and construct a solution to an engineering problem in the home.	11.2-3.1 Define <i>design</i> . 11.2-3.2 Identify the elements of engineering the design process. 11.2-3.3 Explain the role of creativity in the engineering design process. 11.2-3.4 Design and construct a solution to an engineering problem in the community.	11.4-5.1 Design and construct a solution to a real world engineering problem.	11.6.1 Identify the elements of design. 11.6.2 Explore a variety of creativity-enhancing techniques.	11.7.1 Discuss the differences between problem solving- and engineering design strategies. 11.7.2 Explain the role of creativity in the engineering design process. 11.7.3 Develop conceptual designs for transportation, communications, production and bio-related problems. 11.7.4 Use a variety of creativity-enhancing techniques in conceptual design situations. 11.7.5 Explore techniques used to refine conceptual design sketches. 11.7.6 Develop preliminary product layouts.	11.8.1 Apply conceptual designs in building models from product layouts for transportation, communications, production and/or bio-related problems. 11.8.2 Describe conceptual design, embodiment design and detail design and identify their roles in the engineering process.
9-10			11-12		
11.9-10.1 Not enough information available about the engineering processes referred to.			11.11-12.1 Not enough information available about the engineering processes referred to.		